# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/W.No.10/SNS/CEMENT/2012-13

Date: 27.02.2013

## TEST REPORT

| | | |
|---|---|---|
| **CLIENT** | : | **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **AGENCY** | : | **Mr. S. Narayana Swamy**, Contractor, Bangalore. |
| **NAME OF THE WORK** | : | Providing rain water harvesting structures in Ward No. 10, Doddabommasandra, BBMP, Bangalore. |
| **REFERENCE** | : | AEE/Vidyaranyapura/PR/413/2/2012-13 Dated: 25.02.2013 |
| **SAMPLE ID** | : | CEMENT |
| **SAMPLES SUPPLIED BY** | : | AGENCY |

The results of the tests conducted on the cement sample are as follows:

| Sl.No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-1989 |
|---|---|---|---|---|
| 1 | a) Initial Setting Time | IS-4031 (Part -5) | 205 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) | 490 Minutes | Not More than 600 Minutes |
| 2 | Soundness | IS-4031 (Part 3) by the Le-Chatelier method | 1 mm | Not more than 10 mm |
| 3 | Standard Consistency | IS-4031 (Part -4) | 28.50 % | - |

Note:

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M/s. Civil-Tech Consultants & Engineers
# 23/14, 7th Cross, 3rd Stage,
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Jadhav
AE

27/2/13
ಸಹಾಯಕ ಕಾರ್ಯ ಪಾಲಕ ಅಭಿಯಂತರರು.
ವಿದ್ಯಾರಣ್ಯಪುರ ಉಪ ವಿಭಾಗ
ಯಲಹಂಕ ವಲಯ,
ಬೃ. ಬೆಂ. ಮ. ಪಾ., ಬೆಂಗಳೂರು-97

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Job No.: CTCE/BBMP/W.No.10/SNS/SAND/2012-13 : 27.02.2013

## TEST REPORT ON FINE AGGREGATES (SAND)
## IS 383-1970 (RA- 2002)

**Client** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

**Agency** : **Mr. S. Narayana Swamy,** Contractor, Bangalore.

**Name of Work** : Providing rain water harvesting structures in Ward No. 10, Doddabommasandra, BBMP, Bangalore.

**Reference** : AEE/Vidyaranyapura/PR/413/2/2012-13 Dated: 25.02.2013

Date of Testing : 27.02.2013

Material : Sand Total Wt. of Aggregates in gms **2000**

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits For Zone-II |
|---|---|---|---|---|---|
| 10 | 0 | 0 | 0 | 100 | 100 |
| 4.75 | 113 | 5.65 | 5.65 | 94.4 | 90-100 |
| 2.36 | 286 | 14.30 | 19.95 | 80.1 | 75-100 |
| 1.18 | 412 | 20.60 | 40.55 | 59.5 | 55-90 |
| 600 Micron | 386 | 19.30 | 59.85 | 40.2 | 35-59 |
| 300 Micron | 527 | 26.35 | 86.20 | 13.8 | 8-30 |
| 150 Micron | 186 | 9.30 | 95.50 | 4.5 | 0-10 |

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Job No.: CTCE/BBMP/W.No.10/SNS/AGG/2012-13 : 27.02.2013

## TEST REPORT ON COARSE AGGREGATES
### IS 383-1970 (RA- 2002)

**Client** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

**Agency** : **Mr. S. Narayana Swamy,** Contractor, Bangalore.

**Name of Work** : Providing rain water harvesting structures in Ward No. 10, Doddabommasandra, BBMP, Bangalore.

**Reference** : AEE/Vidyaranyapura/PR/413/2/2012-13 Dated: 25.02.2013

Date of Testing : 27.02.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25100**

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits |
|---|---|---|---|---|---|
| 80 | 0 | 0 | 0 | 100 | 100 |
| 40 | 857 | 3.41 | 3.41 | 96.59 | 95-100 |
| 20 | 15241 | 60.72 | 64.14 | 35.86 | 30-70 |
| 10 | 5689 | 22.67 | 86.80 | 13.20 | 10-35 |
| 4.75 | 2457 | 9.79 | 96.59 | 3.41 | 0-5 |

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Job No.: CTCE/BBMP/W.No.10/SNS/STEEL/2012-13 27.02.2013

## TEST REPORT ON REINFORCEMENT STEEL

| | | |
|---|---|---|
| Client | : | **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore. |
| Agency | : | **Mr. S. Narayana Swamy**, Contractor, Bangalore. |
| Name of the work | : | Providing rain water harvesting structures in Ward No. 10, Doddabommasandra, BBMP, Bangalore. |
| Reference | : | AEE/Vidyaranyapura/PR/413/2/2012-13 Dated: 25.02.2013 |
| Date of Test | : | 27.02.2013 |
| Technical Reference | : | IS: 1786-2008 |

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress N/mm² | Tensile strength (Ultimate stress) N/mm² | Elongation percent gauge length | | |
| 1 | 10 | 0.62 | 513 | 548 | 12.80 | O.K | O.K |
| 2 | 12 | 0.89 | 516 | 550 | 13.10 | O.K | O.K |

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JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/W.No.10/SNS/BRICKS/2012-13

Date: 28.02.2013

## TEST REPORT

| | | |
|---|---|---|
| **CLIENT** | : | **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore. |
| **AGENCY** | : | **Mr. S. Narayana Swamy**, Contractor, Bangalore. |
| **NAME OF THE WORK** | : | Providing rain water harvesting structures in Ward No. 10, Doddabommasandra, BBMP, Bangalore. |
| **REFERENCE** | : | AEE/Vidyaranyapura/PR/413/2/2012-13 Dated: 25.02.2013 |
| **SAMPLE ID** | : | BRICKS |
| **SAMPLES SUPPLIED BY** | : | AGENCY |

The results of the tests conducted on the samples are as follows:

| Sl. No | Description | Test method as per IS Codes | Result | Requirement as per IS 1077-1992 (Rev-5) |
|---|---|---|---|---|
| 1 | Compressive Strength Of Bricks | IS 3495-1992 (Part-1) | 5.78 $N/mm^2$ | Class designation 5.0 |
| 2 | Water Absorption of Bricks | IS 3495-1992 (Part – 2) | 10.23 % | Not more than 20 % |
| 3 | Efflorescence of Bricks | IS 3495-1992 (Part – 3) | Moderate | Up to 12.5 Class |
| 4 | Dimensional Analysis of Bricks (minimum Sampling is 20 Nos) | IS 1077-1992 (Rev – 5) | | |
| (a) | Measurement of Length in mm | | 3845 mm | (3800 ± 80 mm) |
| (b) | Measurement of Width in mm | | 1831 mm | (1800 ± 40 mm) |
| (c) | Measurement of Height in mm | | 1429 mm | (1400 ± 40 mm) |

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Job No.: CTCE/BBMP/W.No.10/SNS/CUBE/2012-13

30.03.2013

## TEST REPORT ON CONCRETE CUBES

| | |
|---|---|
| Client | : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore. |
| Agency | : **Mr. S. Narayana Swamy,** Contractor, Bangalore. |
| Name of the work | : Providing rain water harvesting structures in Ward No. 10, Doddabommasandra, BBMP, Bangalore. |
| Reference | : AEE/Vidyaranyapura/PR/413/2/2012-13 Dated: 25.02.2013 |
| Sample ID | : Cement Concrete |
| Size of cubes | : 150mmx150mmx150mm |
| Cross Sectional Area | : 22500 $mm^2$ |
| Technical Reference | : IS: 516-1959 (Reaffirmed 2008) |
| Grade of Concrete | : $M_{20}$ |
| Compressive Strength as on | : $28^{th}$ day |

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 02.03.2013 | 30.03.2013 | 8.152 | 479.8 | 21.32 |
| 2 | 02.03.2013 | 30.03.2013 | 8.249 | 498.3 | 22.15 |
| 3 | 02.03.2013 | 30.03.2013 | 8.327 | 520.4 | 23.13 |

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